

ABSTRACT

The present invention relates to a process chamber 25 for processing a substrate 35 in process gas and reducing emissions of hazardous gas to the environment. The process chamber 25 comprises a support 30 for supporting the substrate 35, and a gas distributor 55 for introducing process gas into the process chamber 25. A gas treatment apparatus 75 is provided to treat and exhaust an effluent from the process chamber 25. The gas treatment apparatus 75 comprises an exhaust system having an exhaust tube 85, and a gas energizer 90 for energizing the effluent in the exhaust tube 85 by microwaves or by RF energy, while a continuous flow of effluent flows through the exhaust tube 85 to reduce the hazardous gas content of the effluent. A computer controller system comprising computer program code operates the process chamber and gas treatment apparatus 75.

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